

Appl. No. 10/500,780
Amendment and/or Response
Reply to Office action of 12 July 2005

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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method of controlling a circuit arrangement for ~~the an~~ AC power supply of a plasma display panel in which the circuit arrangement ~~comprises~~ includes at least a transistor bridge ~~constituted by the~~ that includes bridge transistors T1, T2, T3, T4, an input voltage U0, a capacitor Cp of ~~the a~~ plasma cell and a charging circuit in the form of an auxiliary voltage Uh, a first auxiliary transistor T11 and a first coil L1, ~~and in which the method comprising:~~
 - performing a charging operation to charge capacitor Cp by:
 - controlling the said first auxiliary transistor T11 is rendered as ~~is rendered as~~ conductive at ~~the a~~ beginning of the charging operation, ~~characterized in that after the first auxiliary transistor T11 has been turned on,~~
 - controlling the second bridge transistor T2 of the half bridge continues to be turned on as ~~is rendered as~~ conductive for a delay time t_v , which is greater than zero, to inhibit charging of the capacitor Cp, and is turned off
 - controlling the bridge transistor T2 non-conductive after the delay time t_v has elapsed, to effect the charging of the capacitor Cp.

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2. (Currently amended) A method of controlling a circuit arrangement for ~~the an~~ AC power supply of a plasma display panel, in which the circuit arrangement ~~comprises~~ includes at least a transistor bridge ~~constituted by the that~~ includes bridge transistors T1, T2, T3, T4, an input voltage U0, a capacitor Cp of ~~the a~~ plasma cell and a discharging circuit comprising an auxiliary voltage Uh, a second auxiliary transistor T12 and a second coil L2 ~~and, the method comprising:~~

at the a beginning of the a discharging operation:

controlling the second auxiliary transistor T12 is turned on as conductive, and characterized in that after the second auxiliary transistor T12 has been turned on,

controlling the first bridge transistor T1 of the half bridge continues to be turned on as conductive for a delay time tv, which is greater than zero, to inhibit discharging of the capacitor Cp, and is turned off

after the delay time tv has elapsed, controlling the bridge transistor T1 as non-conductive, to effect the discharging of the capacitor Cp.

3. (Currently amended) A ~~The~~ method of claim 1, ~~characterized in that wherein~~ the delay time tv is ~~about~~ approximately 1/8 of the oscillatory period.

4. (Currently amended) A ~~The~~ method ~~as claimed in of~~ claim 1, ~~characterized in that~~ including

generating the input voltage U0 is generated by from a DC voltage source.

5. (Currently amended) A ~~The~~ method ~~as claimed in of~~ claim 1, ~~characterized in that~~ including

applying the auxiliary voltage Uh is applied to an auxiliary capacitor Cs.

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6. (Currently amended) ~~A~~ The method as claimed in claim 5, characterized in that wherein

the a capacitance of the auxiliary capacitor Cs substantially exceeds by far the a capacitance of the capacitor Cp of the plasma cell.

7. (Currently amended) ~~A plasma display panel~~ An apparatus comprising:

means for controlling a circuit arrangement for the supplying AC power supply of the to a plasma display panel, and

a controller that is configured to control the circuit arrangement;

wherein:

the circuit arrangement comprising at least includes:

a transistor bridge constituted by the that includes bridge transistors T1, T2, T3, T4, an input voltage U0, that is coupled to a capacitor Cp of the a plasma cell, and

a charging circuit comprising that includes:

an auxiliary voltage Uh,

a first auxiliary transistor T11 and

a first coil L1; and is provided for turning on and

the controller is configured to:

control the first auxiliary transistor T11 as conductive at the a beginning of the a charging operation, characterized in that after the first auxiliary transistor T11 has been turned on,

control the second bridge transistor T2 of the half bridge continues to be turned on as conductive for a delay time tv, which is greater than zero, to inhibit charging of the capacitor Cp, and

control the bridge transistor T2 non-conductive is turned off after the delay time tv has elapsed, to effect the charging of the capacitor Cp.

8. (New) The apparatus of claim 7, include

a plasma display that includes the plasma cell.

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9. (New) A method of driving a plasma cell, comprising:

- generating an oscillation signal via a resonant circuit,
- at a start of a charging period of the oscillation signal, providing a low impedance path for the resonant circuit, to increase a current that flows through an inductor of the resonant circuit,
- after a first delay period from the start of the charging period, removing the low impedance path, such that the current of the resonant circuit flows substantially to a capacitor of the plasma cell.

10. (New) The method of claim 9, including:

- at a start of a discharging period of the oscillation signal, providing a low impedance path for the resonant circuit, to increase a current that flows through an other inductor of the resonant circuit,
- after a second delay period from the start of the discharging period, removing the low impedance path, such that the current of the resonant circuit flows substantially from the capacitor of the plasma cell.

11. (New) The method of claim 9, further including

- coupling the capacitor to a voltage source at an end of the charging period, wherein
- the first delay period is selected such that, at the end of the charging period, a voltage of the capacitor provide during the charging period substantially equals a voltage of the voltage source.

12. (New) The method of claim 11, including

- controlling the first delay period based on a difference between the voltage of the capacitor and the voltage of the voltage source immediately before a prior coupling of the capacitor to the voltage source.

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13. (New) The method of claim 9, wherein
the first delay period corresponds to approximately one-eighth of the charging period.
14. (New) A method of driving a plasma cell, comprising:
generating an oscillation signal via a resonant circuit,
at a start of a discharging period of the oscillation signal, providing a low impedance path for the resonant circuit, to increase a current that flows through an inductor of the resonant circuit,
after a delay period from the start of the discharging period, removing the low impedance path, such that the current of the resonant circuit flows substantially from a capacitor of the plasma cell.
15. (New) The method of claim 1, in which the circuit arrangement further includes a discharging circuit that includes a second auxiliary transistor T12 and a second coil L2, the method comprising:
at a beginning of a discharging operation:
controlling the second auxiliary transistor T12 as conductive, and
controlling the bridge transistor T1 as conductive for a delay time t_v ,
which is greater than zero, to inhibit discharging of the capacitor C_p , and
after the delay time t_v has elapsed, controlling the bridge transistor T1 as non-conductive, to effect the discharging of the capacitor C_p .
16. (New) The method of claim 1, wherein
the delay time t_v is selected such that, at an end of the charging operation, a voltage of the capacitor C_p substantially equals the input voltage U_0 .
17. (New) The method of claim 16, including
controlling the delay time t_v , based on a difference between the voltage of the capacitor and the input voltage U_0 at an end of a prior charging operation.